April 3, 2001

METHAMPHETAMINE

Street names: Speed, Crystal, Meth, Chalk, Crank, Corak, Crypto, Fire, Glass, White cross.

What is it? A central nervous system (CNS) stimulant that strongly activates certain systems in the brain.

What does it look like? It exists as a crystal-like powdered substance that is usually white or slightly yellow, depending on the purity, and sometimes comes in large rock-like chunks known as “ice.”

How it's used: Can be swallowed, injected, snorted or smoked.

Short-term effects: The short-term effects experienced by a user of methamphetamine vary significantly based upon the amount of methamphetamine they have used; i.e. a low dose or a high dose. Additionally, the user will experience withdrawal symptoms that also vary by the amount used.

Low dose: Immediately after smoking or intravenous injection, the user experiences an intense sensation, called a "rush" or "flash." Oral or intranasal use produces euphoria — a high, but not a rush. At the lower doses the user experiences an improvement in reaction time and relief from fatigue. As the dose increases, effects will include sensitivity to light, nervousness, headache, motor restlessness, tremor, and, agitation. Other effects might include irritability/aggression, anxiety, nervousness, convulsions, insomnia and possible seizures or heart attacks. Withdrawal symptoms at the lower doses include fatigue, exhaustion and confusion. Because methamphetamine use suppresses appetite, users are more susceptible to other illnesses due to poor health from lack of proper nutrition.

High dose: As the dose increases the symptoms progress to hyperactive reflexes, apprehensiveness, confusion, suspiciousness, paranoia, delusions, hallucinations, irrational behavior, violence, and severe hypertension/chest pains. At extremely high doses the user will experience seizures, coma, and death. Withdrawal symptoms at the high doses include extreme fatigue, drug craving, depression, hypersomnolence, and suicidal behavior.

Long-term effects: Current research indicates that methamphetamine directly damages the human brain causing destructive effects on cognitive and motor skills that are long-term and potentially permanent. There is objective evidence that methamphetamine use produces changes that are consistent with inflammation throughout the brain and indicates that the use of the drug causes an actual physical insult to the brain (like taking

a punch) that brings about physiological changes. These changes are much greater than what has been seen for heroin, alcohol, or cocaine. A decrease in cognitive and motor functions has been established in methamphetamine users who have not taken the drug for a year or more. The research identified memory impairment and slowed motor function (i.e. slower reactions) as two significant effects of methamphetamine use.

Methamphetamine is addictive, and users can develop a tolerance quickly, needing higher amounts to get high, and going on longer binges with some users avoiding sleep for three to 15 days while bingeing. Psychological symptoms include paranoia, hallucinations, repetitive behavior patterns, delusions of parasites or insects under the skin or full-blown toxic psychosis. New research shows that there is long-term damage to brain cells similar to that caused by strokes or Alzheimer's disease.

Operational Readiness Issues: The operational environment is one that clearly requires people who are mentally alert and physically capable of performing complex tasks rapidly and accurately. Flight operations, high technology warfare, nuclear vessel operations, urban warfare, and disaster response are but a few of the challenges facing our modern sailor. These are environments in which the tactical situation can change rapidly and long hours of duty may be required to meet the immediate challenge. The rapid conveyance of complex orders in a dynamically changing and dangerous environment requires people who can comprehend the situation, understand the directives being given, and choose appropriate actions based on the existing conditions without being predisposed towards confusion and/or memory loss. These people must also possess the physical skills necessary to complete the tasks and be physically capable of enduring the long and grueling hours sometimes required of our sailors and marines.

Virtually every aspect of methamphetamine use is in direct opposition to these requirements and quite literally compromises the safety of those using the drug and those around them – not just while they are “high” on the drug but also for an extremely long period of time afterwards. Specific effects from methamphetamine use requiring little explanation of their ramifications include confusion, memory loss, fatigue, decreased coordination, and exhaustion. More insidious is the reduction in operational readiness that occurs because of the higher illness rate seen in those who use methamphetamine. This effect does not stop at the individual sailor but has an influence that spreads like a cancer affecting the morale and well being of every sailor in the Fleet.

References:

Bump, Coulter; “Club Drugs 101: five to know about”
http://www.thedailycamera.com/news/local/11agraph.html

Volkow, Nora D., et.al.; “Higher Cortical and Lower Subcortical Metabolism in Detoxified Methamphetamine Abusers;” The American Journal of Psychiatry, 158:383-389, March 2001
http://ajp.psychiatryonline.org/cgi/content/full/158/3/383

Volkow, Nora D., et.al.; “Association of Dopamine Transporter Reduction With Psychomotor Impairment in Methamphetamine Abusers;” The American Journal of Psychiatry, 158:383-389, March 2001
http://ajp.psychiatryonline.org/cgi/content/full/158/3/377

Logan, Barry K.; “Methamphetamine and Driving Impairment;” Journal of Forensic Sciences, JFSCA, Vol. 41, No. 3, May 1996, pp. 457-464

Baker, Rod; “Methamphetamine: ‘The Problems, The Drug’” The DRE, City of Phoenix, Law Department, City Prosecutors Office, Fall 2000, Vol. 12, Issue 4, pp.2-5